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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------------|-----------------------------|
| 10/584,198 | 03/09/2007 | Sung Uk Moon | 292947US8PCT | 9130 |
| 22850 | 7590 | 08/04/2009 | | |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | EXAMINER PHAM, TIMOTHY X | |
| | | | ART UNIT 2617 | PAPER NUMBER |
| | | | NOTIFICATION DATE 08/04/2009 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/584,198 | Applicant(s) MOON ET AL. | |
| | Examiner TIMOTHY PHAM | Art Unit 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Park et al. (hereinafter “Park”; US 2004/0008646; cited in IDS, same as JP 2003 348643).

Regarding claims 1 and 3, Park discloses a radio communications system and a control apparatus for transmitting same data to a plurality of cells via at least one base station, and performing a soft combining or a selective combining on the same data received by a mobile station (Abstract; paragraphs [0014], [0014], [0047], [0113], e.g., this enables a UE that receives the same data from different node B, to soft-combine the received same data), the radio communications system comprising:

a transmission timing synchronization controlling unit (Fig. 6, reference 602; Fig. 7, reference 704; Fig. 10, reference 1001) configured to set up a cycle at which synchronization processing on transmission timing of the same data among the plurality of cells is performed (paragraphs [0054], [0056], [0070], e.g., the Node synchronization process is determined according to how closely the downlink one-way delay is to the uplink one-way delay, therefore,

it is set up a cycle), or an accuracy by which the synchronization processing is performed (paragraph [0155], e.g., The RNC can acquire timing information of the Node B through the Node synchronization procedure with accuracy of about 0.125ms), for each control apparatus which performs the synchronization processing.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park in view of Kim et al. (hereinafter “Kim”; US 2003/0119452).

Regarding claims 2 and 4, Park discloses the radio communications system and the control apparatus according to claims 1 and 3 respectively above, further comprising:

a cell information managing unit configured to manage a base station, a radio network controller and a core network node which manages each of the plurality of cells (Fig. 4; paragraphs [0024], [0054]-[0055], [0066]); and

wherein the transmission timing synchronization controlling unit of a base station is configured to perform the synchronization processing by a first accuracy at a first cycle (paragraphs [0011], [0048], [0060], e.g., In order to synchronize transmission points of all Node Bs existing in one RNC as stated above, a UE informs the RNC of relative time information for the time points where the UE receives transmission data from each cell).

the transmission timing synchronization controlling unit of a radio network controller is configured to perform the synchronization processing by a second accuracy at a second cycle (paragraphs [0048], [0057], [0059], [0061]).

Park fails to specifically disclose when all of the plurality of cells is managed by the base station and when all of the plurality of cells is managed by the radio network controller.

However, Kim discloses the plurality of cells is managed by the base station (paragraphs [0280]-[0281]), and the plurality of cells is managed by the radio network controller (paragraphs [0140],[0154], [0220]).

Therefore, taking the teachings of Park in combination of Kim as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have a base station performs the synchronization processing by a first accuracy at a first cycle when cells is managed by the base station as taught by Kim and a radio network controller performs the synchronization processing by a second accuracy at a second cycle the plurality of cells is managed by the radio network controller for advantages of improving a reception quality a mobile stations and utilizing radio resources effectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY PHAM whose telephone number is (571)270-7115. The examiner can normally be reached on Monday-Friday; 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent P. Harper can be reached on 571-272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Timothy Pham/
Examiner, Art Unit 2617

/AJIT PATEL/
Primary Examiner, Art Unit 2617